

### Abstract

A circuit designing method includes steps (a) to (d). The step (a) separates a first algorithm description for a simulation into a hardware portion describing hardware and a software portion describing software, and generating a design data automatically, wherein the design data includes behavior data, architecture data, mapping data and address data. The step (b) generates a first clock base description automatically based on the design data, wherein the first clock base description describes relation between the hardware portion and the software portion. The step (c) generates a second clock base description automatically based on the design data, wherein the second clock base description describes the hardware portion. The step (d) generates a first CPU model automatically based on the design data, wherein the first CPU model describes the software portion. Here, the first clock base description, the second clock base description and the first CPU model are used for verifying the design.